

Pantex Clean-up Progress

Active clean-up continues from legacy operations that released contaminants to the perched groundwater and for solvents that were released to soils in the Burning Ground. The perched groundwater clean-up action includes four In-situ bioremediation systems (ISB) and two pump and treat systems. A soil vapor extraction system operates to remove solvents from the Burning Ground soils. One of the primary goals for treatment is to prevent movement of contaminated perched groundwater and solvents in soils to the deeper drinking water aquifer (Ogallala Aquifer). Pantex monitors over 100 perched groundwater wells to evaluate the effectiveness of the clean-up and 28 Ogallala Aquifer wells to evaluate the continued protectiveness of the action for the drinking water aquifer. Monitoring results from Ogallala wells continue to indicate that all constituents of concern are below safe drinking water levels. You can find results on the Mission page at pantex.energy.gov.

Highlights of Clean-up Actions

- This past year, Pantex removed 700 lbs of contaminants through remedial actions.

Totals since start of remedial action :

- 2.9 billion gallons of perched groundwater treated with 1.7 billion gallons beneficially used
- 15,700 pounds of contaminants removed from perched groundwater
- Perched water levels are continuing to steadily decline
- Bioremediation systems are reducing high explosives, perchlorate, and TCE (trichloroethylene) to safe drinking water levels
- 21,300 pounds of solvents removed from soils by the Soil Vapor Extraction System

New Pivot Irrigation System

A surface irrigation pivot sprinkler system will be constructed that will allow treated water to be pumped from Pantex's two pump and treat systems for commercial farming on DOE property east of FM 2373. The new system will provide a consistent long-term option for management of treated water so that the pump and treat systems can fully operate and continue the mission to remove and treat perched groundwater.

Funding was requested in fiscal year (FY) 2021 to design and construct infrastructure for irrigation of land east of FM 2373 using five center pivot sprinklers. The design of the new irrigation system was completed in May 2021 and construction is scheduled to begin in October 2021. Installation of the multiple pivot irrigation units will be built with a total discharge capacity to accommodate the combined effluent flows from the two pump and treat systems and Pantex's Wastewater Treatment Facility (WWTF).

Pantex 2021 Annual Public Meeting

Pantex provides updates of the clean-up progress at an annual Public Meeting held on the second Tuesday of November. This year's meeting will be held at 4:00 p.m. on Tuesday, November 9th, 2021 at the Square House Museum, 501 Elsie Avenue, in Panhandle, TX.

Due to CNS Pantex's requirement to comply with the CDC recommendation of social distancing, limited seating will be available at the public meeting. All Pantex employees are required to wear masks and masks are recommended for the general public.

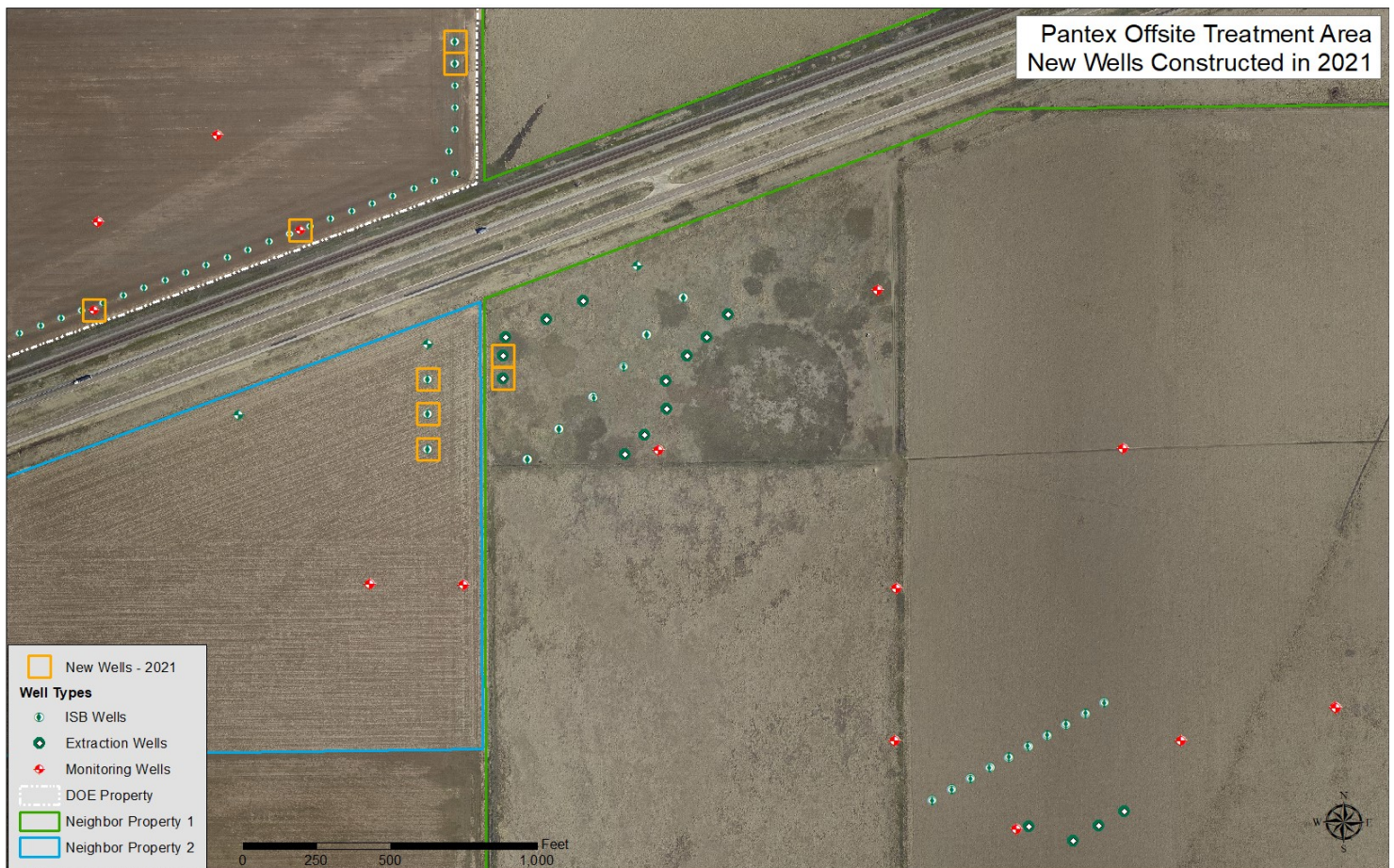
For more information on COVID-19 visit, www.cdc.gov/coronavirus

Offsite Remediation System Efforts Continue

In early 2020, Pantex started drilling wells for a new offsite remediation system. The new system will treat the southeast expanding perched groundwater using a combination of pump and treat and ISB technologies. The system installation will be phased through 2023 and is expected to operate for 15 years, with monitoring continuing afterward to complete cleanup. The 2020 system consisted of 16 injection wells, 11 extraction wells and 3 pump and treat extraction wells. The system was enhanced in 2021 with two additional pump and treat extraction wells and 5 new ISB wells. Three of the 5 new wells were added to an adjacent property to help with cleanup efforts, while 2 additional ISB wells were added to the Southeast ISB Extension to help further cutoff the southeast migrating plume.

The offsite system remedial approach includes pump and treat of groundwater in the northwest corner of the property. A mobile pump & treat trailer will be built in 2022 to treat groundwater from 5 extraction wells and inject the treated water into three downgradient wells providing hydraulic control of the eastern and southwestern edge of the plume. Also in FY 2021, infrastructure to support operation was installed, including heavy duty roads, two equipment pads for injection, pumps for the extraction wells, conveyance piping to carry extracted water for injection supply, and electrical wiring and panels for powering the equipment. The first injection of molasses began in 2021. The next phase (Phase 3) of wells and infrastructure is scheduled for construction in 2022.

Additional information on this system will be presented at the Pantex Environmental Restoration Public Meeting 4:00 p.m. on Tuesday, November 9th, 2021 at the Square House Museum, 501 Elsie Avenue, in Panhandle, TX.



This work of authorship and those incorporated herein were prepared by Consolidated Nuclear Security, LLC (CNS) as accounts of work sponsored by an agency of the United States Government under Contract DE-NA-0001942. Neither the United States Government nor any agency thereof, nor CNS, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility to any non-governmental recipient hereof for the accuracy, completeness, use made, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency or contractor thereof, or by CNS. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency or contractor (other than the authors) thereof.